

The Canadian Entomologist.

LXXI.

GUELPH, JANUARY, 1939

No. 1

FOREWORD

At the recent meetings of the Entomological Society of Ontario, it was decided, in view of the nature of the occasion, to prepare a special number of The Canadian Entomologist, this to be devoted to topics of historical interest. The number is presented herewith. The committee appointed to plan the number included Professor A. W. Baker (chairman), Professor Lawson Caesar, Mr. R. H. Ozburn, and Mr. R. W. Thompson. These gentlemen, the contributors to the number, and numerous others who assisted in the search for photographs and other material have earned the gratitude of the Society. We believe their efforts have produced a number that will be found of general interest.

With the present volume, the editorship of The Canadian Entomologist passes into new hands. It is hoped that the standard set by Dr. McDunnough during his eighteen years of service will be maintained.

W. J. BROWN, Editor.

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A BREATHING SPELL

Four score but five of years so fleet
Give pause to round another bend,
A rallying-place for friends to greet
Ere onward once again we wend.

I.

A gallant flood of noble sweep
Our stream holds bravely on its course,
With sparkling face and limpid deep
That draw from rills beside the source.

A varied scene its banks display
In wood and swamp and far ravine;
By mill and farm it makes its way,
By garden-plot and pasture green.

All honour then to those before
Who pointed first the distant goal;
From hill to vale who steadfast bore
To trace the course our waters roll.

With outlook wide, from upland slope,
Our fathers viewed all Nature's ground;
We strive within a smaller scope
To perfect out our little round.

II.

Children at play upon the shore
Of a mysterious, murmuring sea—
But gathered shells is all our lore,
The vaunt of poor humanity.

'Mid doubt and error on we go,
By glimmering star a path we steer;
To seek the truth but not to know,
The lot of all who voyage here.

We have our moments rich and rare
Amid long hours of darkest night,
When on our vision bursts the glare
Of meteor's trail or Northern Light;

Till comes with dawn the lookout's call,
Strange ships beat up by wind and lee,
In one great quest adventurers all
We sail no more a lonely sea.

III.

Within the heart's all-cherished shrine
Of talents manifold are three
That Nature's mysteries best divine—
Love, Reverence and Humility.

In earnest work, in eager play,
By Nature-love united all,
With might and main do what we may,
Nor boast the great, nor scorn the small.

"So much to do, so little done"
Each lonely labourer's parting sigh,
Then speed the work so well begun,
The common purpose cannot die.

Each has his place within the plan,
His proper place none else may fill;
In brotherhood our course began,
By brotherhood is furthered still.

Then onward once again we wend
From rallying-place for friends to greet,
From pause to round another bend
Four score but five of years so fleet.

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THE SEVENTY-FIFTH ANNIVERSARY MEETINGS OF THE ENTOMOLOGICAL SOCIETY OF ONTARIO

The Seventy-fifth Anniversary of the founding of the Society was celebrated at the Ontario Agricultural College, Guelph, by meetings held November 23rd to the 26th, 1938, under the chairmanship of the president, Dr. Arthur Gibson, Dominion Entomologist.

The meetings were well attended, the gathering being the largest and one of the most enthusiastic in the history of the Society. One hundred and thirty-five members, delegates, and visitors were registered for the session. This number included not only members and delegates from across Canada, but also many representatives of societies and institutions from the United States. In addition to greetings being carried personally by the many delegates and representatives present, letters of congratulation were received from a large number of societies and educational and research institutions.

The following is a list of societies and institutions which were represented by delegate at the meetings.—

- The Entomological Society of America—Dr. A. L. Melander.
- The Entomological Society of Washington—Dr. C. H. Hadley.
- The American Association of Economic Entomologists—Dr. E. N. Cory.
- The American Entomological Society—Dr. E. M. Walker.
- The Academy of Natural Sciences of Philadelphia—Dr. A. Gibson.
- The Rochester Academy of Sciences—R. L. Post.
- The Royal Society of Canada—Dr. A. Gibson.
- The Royal Canadian Institute—Dr. E. M. Walker, Prof. J. R. Dymond.
- The Canadian Society of Technical Agriculturists—H. G. Crawford.
- Federation of Ontario Naturalists—Dr. W. E. Saunders, F. J. A. Morris.
- Toronto Field Naturalists Club—Dr. F. P. Ide.
- Ottawa Field Naturalists Club—G. H. Hammond.
- Ontario Research Foundation—T. D. Jarvis.
- The French-Canadian Association for the Advancement of Science—
Dr. Georges Maheux.
- The Brodie Club—F. A. Urquhart.
- Dalhousie University—Dr. E. M. Walker.
- The University of British Columbia—Dean F. N. Clement.
- The University of Toronto—Dr. F. P. Ide.
- McMaster University—Prof. L. O. Gaiser, Prof. A. E. Warren.
- The University of Western Ontario—Dr. J. D. Detwiler.
- Laval University—Dr. Georges Maheux.
- Ontario Agricultural College—Dr. G. I. Christie.
- Ontario Veterinary College—Dr. L. Stevenson.
- Oka Agricultural Institute—Rev. Father Leopold.
- School of Agriculture, St. Anne de la Pocatiere—P. Lagloire.
- St. Patrick's College—Rev. Father F. E. Banin.
- The University of Rochester—R. L. Post.
- The University of Maryland—Dr. E. N. Cory.
- Ohio State University—Dr. C. H. Kennedy.
- Cornell University—Dr. C. E. Palm.
- Rutgers University & New Jersey Agricultural Experiment Station—
Dr. B. F. Driggers.
- Pennsylvania State College—Dr. E. A. Richmond.
- College of the City of New York—Dr. A. L. Melander.

The Department of Agriculture of the Province of Ontario—W. R. Reek.
The Department of Lands & Forests of the Province of Ontario—
J. A. Brodie, H. H. Parsons.

New York Agricultural Experiment Station, Riverhead—Dr. H. C. Hockett

The following is a list of societies, institutions, and individuals which, although not represented by delegates, sent official messages of congratulation to the Society:—

Brooklyn Entomological Society.

Entomological Society of Washington.

Buffalo Society of Natural History.

Kansas Academy of Sciences.

Cambridge Entomological Club.

New York Academy of Sciences.

Nova Scotian Institute of Science—F. R. Hayes.

Provancher Society of Natural History.

Canadian Lumbermen's Association—R. L. Sargent.

Acadia University—Pres. F. W. Patterson.

Nova Scotia College of Agriculture—Principal L. T. Chapman.

University of Montreal—G. Chagnon.

University of McGill & Macdonald College—Dean W. H. Brittain.

University of Manitoba—Prof. A. V. Mitchener.

University of Saskatchewan—Pres. J. S. Thomson.

University of Alberta—Pres. W. A. R. Kerr, Prof. E. H. Strickland.

University of California—Dr. W. B. Hermes, Dr. H. T. Quayle.

University of Kansas—Dr. H. B. Hungerford.

University of Illinois—Dr. W. B. Balduf.

University of Chicago—Pres. R. M. Hutchins.

University of Minnesota—Dr. A. A. Granovsky.

Ohio State University—Dr. R. E. Osborne, H. H. Crowell.

Purdue University—Dr. J. J. Davis.

College of Agriculture, California—Dr. E. O. Essig.

Kansas State College—Dr. Geo. A. Dean.

Pennsylvania State College—Dr. H. E. Hodgkiss.

New York School of Forestry—Dr. A. H. MacAndrews.

Massachusetts State College—Dr. C. P. Alexander.

Michigan State College—Dr. R. Hutson.

Columbus Entomological Society—H. H. Crowell.

Clemson College of Agriculture—F. Sherman.

Department of Agriculture, Ottawa—Dr. H. Barton.

Minister of Agriculture, Ontario—Honourable Mr. P. M. Dewan.

Minister of Agriculture, Quebec—Honourable Mr. B. Dussault.

Fruit & Vegetable Marketing, Dept of Agriculture, Ottawa—Col. R. L. Wheeler.

Department of Lands & Mines, New Brunswick—G. A. Prince.

Economics Division, Department of Agriculture, Ottawa—J. Coke.

National Research Council—Pres. A. G. L. McNaughton.

Bureau Entomology & Plant Quarantine, U. S. Dept. of Agriculture—

L. A. Strong, D. J. Caffrey, A. J. Burgess, R. E. Snodgrass.

Experimental Farms, Ottawa—Dr. E. S. Archibald.

Production Service, Ottawa—G. B. Rothwell.

Health of Animals Division, Ottawa—Dr. A. E. Cameron.

Science Service, Ottawa—Dr. J. M. Swaine.

Department of Mines, Lands & Forests, Toronto—W. C. Cain.

Forest Rangers School, Province of Quebec—H. Roy.
 Canadian Pulp & Paper Association—A. Koroleff.
 Department of Agriculture, Saskatchewan—S. H. Vigor.
 Department of Agriculture, New York State—A. B. Buckholtz.
 Illinois Natural History Survey & Illinois Experiment Station—
 Dr. W. B. Flint.
 Ohio Agricultural Experiment Station—Dr. J. S. Hauser.
 E. S. Hopkins, Experimental Farms, Ottawa.
 Dr. A. Hartzell, Boyce Thompson Institute.
 Dr. G. W. Herrick, Cornell University.
 Dr. C. E. Mickel, Entomological Society of America and University of
 Minnesota.
 H. F. Hudson, London, Ont.

The following is the programme of the meetings:—

Wednesday Evening—8.00 p. m.

Council Meeting in the Faculty Lounge, Administration Building.

Thursday Morning—9.00 a.m.

Business Session—Financial Report; Report of Council; Appointment of Nominations and Resolutions Committees; General Business.

President's Remarks.

- "A Note on the Grasshopper Control Campaign in Manitoba for 1938"—A. V. Mitchener, University of Manitoba, Winnipeg, Man.
- "The Canadian National Collection of insects"—W. J. Brown, Division of Entomology, Ottawa.
- "Notes on the Life History of *Parasymmetus clausus* Osten Sacken (Diptera, Nemestrinidae)"—Prof. G. J. Spencer, University of British Columbia, Vancouver, B. C.
- "The Mullein Leaf Bug—*Campylomma verbasci* Meyer, as an Apple Pest in Nova Scotia"—A. D. Pickett, Provincial Entomologist, Truro, N. S.
- "Preserving Insect Specimens and Preparing Material for Display"—Dr. R. L. Post, Ward's Natural Science Est., Rochester, N. Y.
- "Studies on Repellents for Biting Flies"—C. G. MacNay, Division of Entomology, Ottawa.
- "Control Measures for the House Cricket"—L. Caesar and G. Dustan, Dept. of Entomology, O. A. C., Guelph, Ont.
- "Notes on the Appearance of the European Earwig in Ontario"—A. G. McNally, Dept. of Entomology, O. A. C., Guelph, Ont.
- "Outline of the Life History of the Hop Vine Borer, with Notes on Control"—H. A. Gilbert, Division of Entomology, Ottawa.
- "A Contribution to the Knowledge of Tobacco Insects in Canada"—Geo. M. Stirrett, Dom. Entomological Laboratory, Chatham, Ont.
- "Progress Report on Pea Moth. Investigations on the Gaspé Coast"—Dr. A. D. Baker, Division of Entomology, Ottawa.

Thursday Afternoon—1.45 p. m.

Presentation of Delegates.

- "Native Parasites and Predators Attacking *Diprion polytomum* Hartig in Canada"—W. A. Reeks, Dom. Entomological Laboratory, Fredericton, N. B.
- "Control of the Fall Cankerworm on Shade Trees by Spraying with Pyrethrum" (lantern)—R. E. Balch, Dom. Entomological Laboratory, Fredericton, N. B.
- "Notes on the Gypsy Moth Outbreak in New Brunswick and the Japanese Beetle Preventive Work"—Leonard S. McLaine, Production Service, Ottawa.
- "The Jack-pine Sawfly Problem"—C. E. Atwood, Division of Entomology, Ottawa.
- "The Mountain Ash Sawfly"—L. Daviault, Division of Entomology, Ottawa.
- "Recent Extensions of the Known Distribution of the European Spruce Sawfly"—A. W. A. Brown and H. S. Fleming, Division of Entomology, Ottawa.
- "The Forest Tent Caterpillar in Ontario 1931-1938"—A. W. A. Brown, Division of Entomology, Ottawa.
- "The Forest Insect Survey for 1938"—A. W. A. Brown, Division of Entomology, Ottawa.
- "Coloured Motion Pictures of Insect Life"—Dr. A. L. Melander, College of the City of New York.
- "Supply and Demand in Forest Entomology"—J. J. de Gryse, Division of Entomology, Ottawa.
- "Tests of Certain Contact Insecticides on the Eggs of the Columbine Borer"—W. G. Matthewman, Division of Entomology, Ottawa.

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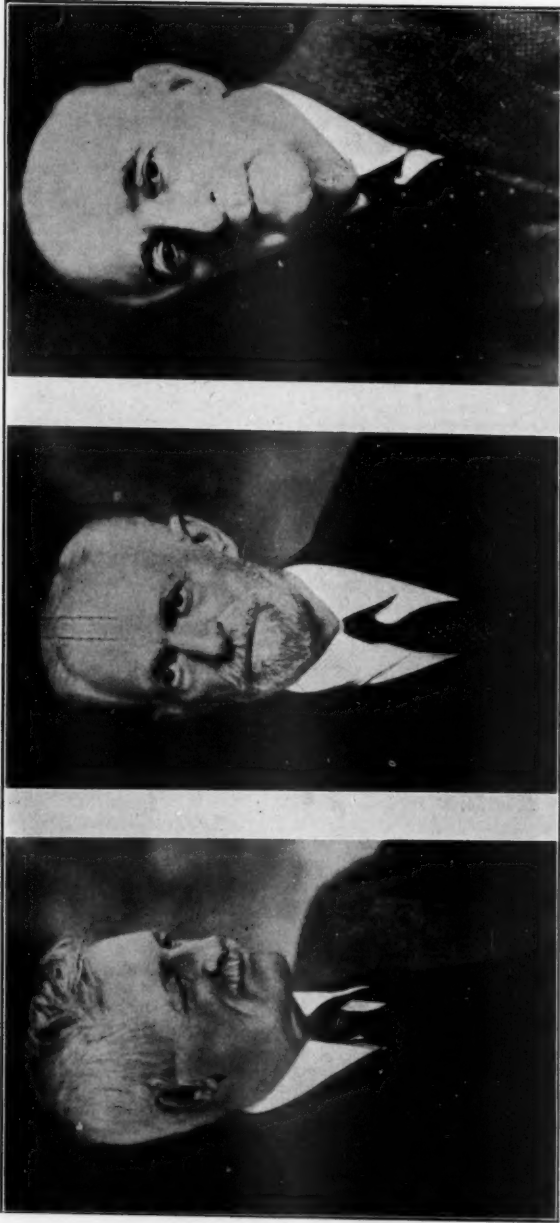
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THREE MEMBERS OF LONGEST STANDING PRESENT AT THE ANNIVERSARY

W. E. SAUNDERS

JOHN DEARNESS

ARTHUR GIBSON

"Report on the Test of Tartar Emetic on the Control of the Gladiolus Thrips"—W. G. Matthewman and A. G. Dustan, Division of Entomology, Ottawa.

Thursday Evening—6.15 p.m.

Banquet in the College Cafeteria, Administration Building. Dr. Arthur Gibson, Dominion Entomologist, Chairman.

Friday Morning—9.00 a.m.

"Thirty Years' Experience with Orchard Sprays in Nova Scotia"—A. Kelsall, Entomological Laboratory, Annapolis Royal, N. S.

"The White Grub Problems in New York State", (motion picture)—Dr. C. E. Palm, Cornell University, Ithaca, N. Y.

"White Grub Prospects in Ontario for 1939"—G. H. Hammond, Dom. Entomological Laboratory, Spencerville, Ont.

"At What Stage is the June beetle More Vulnerable?"—Dr. Georges Maheux and Georges Gauthier, Dept. of Agriculture, Quebec, P. Q.

"Notes on Some Dragonflies from the Patricia Portion of Kenora District, Ontario"—Dr. E. M. Walker, University of Toronto, Toronto, Ont.

"Present Status of the Alfalfa Snout Beetle in New York State"—Dr. C. G. Lincoln, Cornell University, Ithaca, N. Y.

"Results of Two Years' Experiments on the Control of the Cabbage Maggot"—Rene Mougeot, Dept. of Agriculture, Quebec, P. Q.

"Recent Developments in Cabbage Worm Control on Long Island"—H. C. Huckett, Cornell University, Agricultural Experiment Station, Riverhead, N. Y.

"Notes on the 1938 Outbreak of the Army Worm, *Leucania unipuncta* Haw. in Ontario"—A. W. Baker, Dept. of Entomology, O. A. C., Guelph, Ont.

"The 1938 Outbreak of the Army Worm in Quebec"—Dr. Georges Maheux and Pellerin Lagloire, Dept. of Agriculture, Quebec, P. Q.

"Notes on Corn Borer Resistance in Hybrid Corn (II.) with a Brief Statement of the Infestation Situation in Ontario in 1938"—R. W. Thompson, Dept. of Entomology, O. A. C., Guelph, Ont.

"A Field Experiment on the Control of European Corn Borer, *Pyrausta nubilalis* Hubn. by *Beauveria bassiana* Vuill." (II.)—Geoffrey Beall, Geo. M. Stirrett, and I. L. Conners, Dom. Entomological Laboratory, Chatham, and Division of Botany and Plant Pathology, Ottawa, Ont.

"The Practical Application of Analysis of Variance to Studies on *Illinoia pisi* Kalt" (lantern)—J. B. Maltais, Dom. Entomological Laboratory, Hemmingford, Que.

Friday Afternoon—2.00 p. m.

"Insect Polyembryony" (lantern)—Dr. R. W. Leiby, Cornell University, Ithaca, N. Y.

"Living With the Japanese Beetle"—C. H. Hadley, U. S. Dept. of Agriculture, Moorestown, New Jersey.

"Mealy Bug Injury and Crinkle Leaf on Strawberry" (lantern)—A. A. Hildebrand, Dom. Laboratory of Plant Pathology, St. Catharines, Ont.

"A Plea for the Preservation of Pelee Island Point as a Wild Life Sanctuary" (lantern)—Dr. C. H. Kennedy, Ohio State University, Columbus, Ohio.

"The Progress of Economic Entomology in Ontario Since the Organization of this Society in 1863"—L. Caesar, O. A. C., Guelph, Ont.

"The Canadian Entomological Service. Fifty Years of Retrospect, 1887-1937"—Dr. Arthur Gibson, Dominion Entomologist, Ottawa, Ont.

"Historical Notes on the Development of Entomology in Quebec"—Dr. Georges Maheux, Dept. of Agriculture, Quebec, P. Q.

"A Short History of the Montreal Branch"—H. A. U. Monro, Production Service, Montreal, P.Q.

"Motion Picture Film Showing Some of the Parasite Work Conducted in Central Europe"—Dr. Arthur Gibson, Dominion Entomologist, Ottawa.

"The Termite as an Object Lesson"—Dr. E. N. Cory, University of Maryland, College Park, Maryland.

"Chironomidae or Midges of Costello Lake, Algonquin Park" (lantern)—R. B. Miller, University of Toronto, Toronto, Ont.

"The Numbers of Insects Emerging from Different Types of Bottom in a Stream" (lantern)—W. M. Sprules, University of Toronto, Toronto, Ont.

"Seasonal Changes in the Numbers of Aquatic Insects Emerging from Rapids in a Stream" (lantern)—Dr. F. P. Ide, University of Toronto, Toronto, Ont.

Friday Evening—7.30 p.m.

Smoker—Faculty Lounge—Administration Building.

"Woodland Lures"—Frank Morris, Peterborough, Ont.

"Etymology and Entomology"—C. E. Petch, Hemmingford, P. Q.

Saturday Morning—9.00 a. m.

Business Session—Reports of Committees; Election of Officers; General Business.

- "Further Observations on the Apple Maggot"—J. A. Hall, Dom. Entomological Laboratory, Simcoe, Ont.
- "Control of the Potato Leaf Hopper on Apple Nursery Stock"—P. I. Bryce, Dom. Entomological Laboratory, Vineland Station, Ont.
- "Miscellaneous Notes on the Codling Moth"—W. G. Garlick, Dom. Entomological Laboratory, Vineland Station, Ont.
- "Studies on the Peach Tree Borer"—T. Armstrong, Dom. Entomological Laboratory, Vineland Station, Ont.
- "Host Plants and Geographical Distribution of Canadian Chrysomelids"—Jos. I. Beaulieu, Dept. of Agriculture, Quebec, P. Q.
- "On the Biology of the Codling Moth"—Andre A. Beaulieu, Dept. of Agriculture, Quebec, P. Q.
- "Preliminary Observations on the Oviposition Habits of Some Species of the Genus *Exenterus*"—J. M. Barclay, Parasite Laboratory, Belleville, Ont.
- "A Strain of *Trichogramma semblidis* Aus. from Prince Edward County, Ont."—W. E. van Steenburgh, Parasite Laboratory, Belleville, Ont.
- "A Laboratory Method for the Propagation of *Microcryptus basizonius* Grav."—Thelma Green, Parasite Laboratory, Belleville, Ont.
- "Review of Biological Control of the Oriental Fruit Moth in Ontario"—W. E. van Steenburgh and H. R. Boyce, Parasite Laboratory, Belleville, Ont.
- "A Note on the Mating of *Coelopisthia nematocida* Packard"—L. R. Finlayson, Parasite Laboratory, Belleville, Ont.
- "Some Field Observations on the Biology of *Chelonus annulipes* Wesm., an introduced Parasite of the European Corn Borer"—H. G. James, Parasite Laboratory, Belleville, Ont.
- "Some Observations on the Effect of Temperature on the Sex Ratio of a Hymenopterous Parasite *Chelonus annulipes* Wesm."—Geo. Wishart, Parasite Laboratory, Belleville, Ont.

Notes on Some of the More Important Insects of the Season 1938 in Canada

Nova Scotia	A. D. Pickett, A. Kelsall
New Brunswick	R. P. Gorham
Quebec	G. Maheux, C. E. Petch
Ontario	L. Caesar, W. A. Ross
Manitoba	A. V. Mitchener, R. D. Bird
Saskatchewan	K. M. King
Northern Alberta	E. H. Strickland
Southern Alberta	H. L. Seamans
British Columbia	E. R. Buckle

In referring to the programme, particular mention should be made of the banquet on Thursday evening tendered to the Society by the Ontario Agricultural College. This occasion marked the highlight in celebration of the Seventy-fifth Anniversary. The President of the Society, Dr. Arthur Gibson, presided and addressed the gathering, announcing the delegates and giving a list of societies and institutions sending letters of congratulation. President Christie of the Ontario Agricultural College, in extending a welcome to the gathering, offered official and personal congratulations to the Society. Mr. W. R. Reek, Deputy Minister of Agriculture for the Province of Ontario, brought greetings and congratulations from the Honourable Mr. Dewar, Minister of Agriculture, and tendered the best wishes of the Department. Mr. Reek assured the members of the Society that the Department stood behind them in their efforts. Professor A. W. Baker then gave an account of the early history of the Society, illustrated by slides of the founders, of older members of the Society, and of early group pictures of the Society. During his address on the history, Professor Baker introduced the three members of the Society of longest standing present at the anniversary meetings. These were Dr. W. E. Saunders and Dr. John Dearnness of London, Ont., and Dr. Arthur Gibson, Dominion Entomologist and President of the Society during its Seventy-fifth Anniversary. Dr. Saunders and Dr.

Dearness each addressed the gathering, giving most interesting accounts of the early days of the Society. Dr. Saunders concluded his address by presenting to the Society, for its library, a bound manuscript on "Insects of Staple Crops" which his father, Dr. W. Saunders, one of the founders of the Society, had been preparing as a companion volume to his "Insects Affecting Fruit Trees".

Mention should also be made of the coloured motion picture films presented by Professor A. L. Melander of the College of the City of New York. These were presented on the Thursday afternoon programme and were shown at a special meeting next day to more than eight hundred people.

A feature of the business meeting of the Society Saturday morning was the election of Dr. W. E. Saunders and Dr. John Dearness to honorary membership.

A. W. BAKER

OFFICERS OF THE SOCIETY FOR THE SEVENTY-FIFTH ANNIVERSARY YEAR

President—Dr. Arthur Gibson.

Vice-President—Dr. Georges Maheux.

Secretary-Treasurer and Librarian—R. H. Ozburn.

Editor—Dr. J. H. McDunnough.

Associate Editor—H. G. Crawford.

Assistant Editor—Dr. A. D. Baker.

Directors

Ontario, Dr. Fred Ide.

Manitoba, Prof. A. V. Mitchener.

Maritimes, F. C. Gilliatt (Deceased).

Alberta, H. L. Seamans.

Quebec, G. A. Moore, President, Montreal Branch.

British Columbia, E. P. Venables, President of Entomological
Society of British Columbia.

Auditors—Prof. L. Caesar, G. G. Dustan.

GREETINGS FROM THE ENTOMOLOGISTS OF THE UNITED STATES TO THE ENTOMOLOGICAL SOCIETY OF ONTARIO ON THE OCCASION OF THE SEVENTY-FIFTH ANNIVERSARY

Any felicitations which I might bring from entomologists in the United States to the entomologists of Canada make me realize I had never thought before in terms of a distinction between entomology in Canada and entomology in the United States. Basic science is international. Its membership is an international brotherhood. Your science is our science. We are entomologists together. May we then rejoice with you in this union of effort from the very beginnings of organized entomology in America. It has been expressed so adequately in the seventy-five years of the international service to entomology of the Entomological Society of Ontario.

This happy cooperation has not come about entirely of itself. All things organic are a balance of integrating and of disintegrating forces. Leaders in any social organization have to keep these forces equal. Co-operative endeavor for so long a period of years speaks well for the

leaders in entomology in Canada and in the United States as evidence of men who can maintain this fair balance. Let us hope that we will continue to have just such able leadership.

Certain forces and points of view inherent in applied entomology tend to separate entomologists of adjoining political areas. Applied entomology has to be administered with regard to political boundaries, while in quarantine work all individuals across the line may be suspected. In the pure science this tendency to split along political boundaries is much less evident. The United States and Canada are the only two adjoining countries in the world where entomology has developed with such a minimum of inimical rivalry. From the beginning we have worked together and not as rivals. I wish to review a few of the many bonds which have steadily and surely effected the close cooperation and pleasure in joint work which has always existed between entomologists of Canada and of its neighbor the United States.

One real basis of this pleasurable cooperation comes probably from our common ancestry. This has not been diminished in effect by two emigrations from the States into Canada: one during the American Revolution when many loyal families moved over the border into eastern Ontario; the other the great movement of farmers in the past generation from the mid-western states into the prairie provinces of Canada.

The development of entomology has had interesting similarities in the two countries but the two developments have not been exactly parallel. Because of its longer and more severe winters Canada has developed agriculturally more slowly than has the warmer United States. Below the border the needs for applied entomology became insistent at an earlier date. These earlier needs made an earlier opening of state funds for the development of our science which thus roughly parallels the development of agriculture itself.

While the pure phase of any science is basic, the actual development of the science comes from money derived from its applied phases. In the States this financial build-up during the latter half of the nineteenth century was largely the work of a group of state entomologists. It would appear that its foundations rested upon the volume by T. W. Harris published in 1841, "A Report on the Insects of Massachusetts Injurious to Vegetation". This report was the first well balanced book covering insects under American conditions. Besides articles in farm magazines, the development of published work in economic entomology was largely through various annual state reports, the Massachusetts, New York, Illinois, and Missouri reports. The men in this work, Fitch, Lintner, Packard, Walsh, LeBaron, Thomas, and C. V. Riley were prolific writers, and some were good advocates before horticultural societies. They were forceful leaders. With the passage by Congress of the Hatch Act in 1888, economic entomology came into its own as a well financed business through numerous state experiment stations. The need of research entomologists to man the work brought about a development of departments of entomology in state agricultural colleges. With this speeding up of entomology during the nineties of the last century, Congress gave more funds for federal stations which by the first years of the present century were scattered widely in the States.

Canadian entomology passed through a nearly parallel development. The leadership here was in the hands of such men as William Saunders, James Fletcher, and C. J. S. Bethune. Besides the reports

of the Entomological Society of Ontario, articles on economic entomology were published in your journal, the Canadian Entomologist. The first of the modern series of good manuals on economic entomology was contributed to this period of development by Canada. In 1883 William Saunders published his volume "Insects Injurious to Fruits". For the ensuing twenty-five years it appears to have been the standard American work in the field. Up to this point in the development of Canadian entomology, leadership lay in Saunder's work at the Experimental Farms and in the activities of the Entomological Society of Ontario. Eventually leadership became definitely established in the Dominion Department of Agriculture very much as in the States it shifted into the Federal Department of Agriculture. In 1910 Parliament passed the legislation termed "The Destructive Insect and Pest Act". The accompanying appropriations energized entomological work. By the year 1914, Dr. C. Gordon Hewitt, Dominion Entomologist, had established the first line of laboratories from Nova Scotia to British Columbia. From these items we see that development was nearly paralled above and below the border and that both Canadian and American entomologists contributed to that vital period of development which preceded the establishment of experiment stations.

About the time of the rise of the state experiment stations, the two groups came together to organize an association of those interested in the economic field. The first draft of the constitution for this society was worked out by James Fletcher, Dominion Entomologist, and L. O. Howard on a visit of the former to Washington in July, 1889. The American Association of Economic Entomologists was organized and the constitution put into effect at the Toronto meeting of the A. A. A. S. in August of the same summer. This society actually originated on Canadian soil.

The presidency of the Association has passed back and forth. James Fletcher was its second president while at later dates C. Gordon Hewitt, Arthur Gibson and L. S. McLaine have served in the honorable position. At present the Association has thirty-two Canadian members.

In 1906 the two groups of entomologists came together again and organized the Entomological Society of America for the consideration and publication of work in the pure phases of entomology. The success of its meeting and of its journal, the *Annals*, has been due to the support given by entomologists on both sides of the border. Two Canadians, C. J. S. Bethune and Arthur Gibson,* have been elected president. At present there are thirty-five Canadian members.

In further evidence of cooperation I could list the various Canadian entomologists who have worked on American projects and American entomologists who have worked on Canadian soil. There always has been a free flow of talent across the border. I could name the various Canadian entomologists who have taken higher degrees in many American universities, and finally I could enumerate the numerous conferences between Canadian and American officials on the many quarantine and other border problems that have arisen.

May I close with repetition of my first thought: we are so closely and amicably united one with another in the same entomological problems that it is difficult to find groups distinct enough to warrant the bearing of greetings from one side of the border to the other. Let us rather rejoice together in the long history of our cooperative work.

CLARENCE HAMILTON KENNEDY, Ohio State University

*E. M. Walker was elected president December 28th, 1938, for the year 1939.

A SHORT HISTORY OF THE ENTOMOLOGICAL SOCIETY OF ONTARIO*

BY A. W. BAKER

Ontario Agricultural College, Guelph

Our society really owes its origin to an enthusiastic interest in entomology on the part of two young men who were beginning a study of insects shortly after the middle of the last century, and to the support and encouragement given them by a college professor who himself had a non-professional interest in entomology. These two young men were Charles James Stewart Bethune and William Saunders. The former was to become headmaster of Trinity College School and later head of the Department of Entomology and Zoology at the Ontario Agricultural College. The latter, as director, was to organize the experimental farms system of the Dominion Department of Agriculture, and also was to become father to W. E. Saunders, himself secretary of the society for many years and now dean of Canadian naturalists. The college professor was Dr. Henry Croft, Professor of Chemistry in the University of Toronto.

At the early time to which I refer, C. J. S. Bethune was a student at Trinity College in Toronto, and William Saunders was a druggist and chemist in London, C. W. Through the meetings of the Canadian Institute, Bethune met a number of professors of the University of Toronto who encouraged his interest in entomology. One of these was Professor Croft who suggested that Bethune should write to young Saunders in London. Both these young men had not only a keen interest in entomology, but also an interest in nature in general. A warm friendship soon grew up between them. As they discussed their common interests from time to time, they decided to try to get entomologists in Canada acquainted with one another. By correspondence these men secured the names of thirty-six persons living in Canada who were interested in entomology. This list was published in the "Canadian Naturalist and Geologist" in June, 1862, and is given here as originally published for present interest and future record.

LIST OF ENTOMOLOGISTS IN CANADA IN THE YEAR 1862.

From the Canadian Naturalist and Geologist, volume 7, pages 199 to 201, prepared by C. J. S. Bethune and Wm. Saunders.

Beadie, D. W., St. Catharines, C. W., Coleoptera and Lepidoptera.

Bell, R., Provincial Geological Survey, Montreal. All orders, but specially Coleoptera and Lepidoptera.

Bethune, Rev. Charles J. S., B. A., Cobourg, C. W., Coleoptera and Lepidoptera.

Billings, B., Prescott, C. W., Coleoptera, Lepidoptera, and Orthoptera.

Billings, E., F. G. S., Provincial Geological Survey, Montreal. Coleoptera and Lepidoptera.

Bush, Geo., Coldwater, County of Simcoe, C. W., Insects of all orders; collects also for sale.

Clementi, Rev. Vincent, B. A., Peterboro, C. W., Coleoptera and Lepidoptera.

Cottle, Thomas, Woodstock, C. W., Lepidoptera.

Couper, William, National Bank Building, John Street, Quebec. Entered the entomological fields of Canada in 1843, and still continues his researches. Collects all orders, and studies the geographical distribution of Coleoptera.

*Address delivered at the seventy-fifth annual meeting of the Entomological Society of Ontario.

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Minutes

A meeting of Canadian Entomological was held at Toronto in the rooms of the Canadian Institute on Thursday the 16th of April ¹⁸⁸⁵ for the purpose of taking into consideration the propriety of forming a society for the advancement of Entomological pursuits.

The following gentlemen were present The Revd Prof W. H. Church F.R.S. Prof H. Croft D.C.L. Beverly R. Mann M.A. J. H. Sangster Esq. A.M. and J. H. Hurst Esq. of Toronto. Thos. Candy Esq. M.D. and H. Candy Esq. of York Mills. The Revd C. S. Bethune M.A. of Cobourg and W. Saunders Esq. of London Ont.

Prof. Church was appointed Chairman and Mr. Bethune Sec. Protem.

Letters of apology were read from E. Bellings Esq. F.R.S. of Montreal R. V. Rogers Esq. Kingston Thos. Reynolds Esq. Hamilton R. Bellings Esq. of Prescott Revd V. Chase B.A. of Peterboro and E. B. Reed Esq. London.

These gentlemen expressed their deep regret at their inability to attend and pledged themselves to do all in their power to further the interests of the Society.

The following resolutions were then unanimously adopted:

- (1) That a society be formed to be called "The Entomological Society of Canada" consisting of all students and lovers of Entomology who shall express their desire to join it and conform to its regulations.
- (2) That its officers shall consist of "President Secretary Treasurer and a Curator to be elected annually at the first general meeting in each year whose duty it shall be to manage the affairs of the Society."
- (3) That the Annual Contribution of members shall

Cowdry, Thomas, M. D., York Mills, County of York, C. W., all orders.

Cowdry, N. Harrington, York Mills, C. W.

Croft, Prof. Henry, D. C. L., University College, Toronto.

Collects all orders, but more especially Hymenoptera and Coleoptera. His collection of Coleoptera is the finest in the Province.

Crooks, Miss Kate, Hamilton, C. W.

Cummings, Willoughby, Chippawa, C. W., Coleoptera and Lepidoptera.

Denton, J. M., Dundas Street, London, C. W., Lepidoptera and Coleoptera.

Devine, Thomas, Crown Lands Department, Quebec.

Dewar, Miss, London, C. W., Coleoptera and Lepidoptera.

Edwards, W., Port Stanley, C. W., Coleoptera and Lepidoptera.

Gibbon, Miss, St. Mary's, C. W., Lepidoptera.

Girdwood, G. P., Asst. Surgeon, Grenadier Guards, Montreal.

Girdwood, Mrs. G. P., Montreal.

Grant, Francis, Orillia, C. W., Coleoptera and Lepidoptera.

Hill, Rev. Geo. S. J., M. A., Markham, County of York, C. W., Coleoptera and Diptera.

Hincks, Rev. William, F. L. S., Prof. of Nat. Hist., University College, Toronto. Studies all orders, but does not collect.

Hubbert, James, Knox College, Toronto, and (during vacations) Grafton, County of Northumberland, C. W., Diptera, Neuroptera, and to some extent, Coleoptera.

Kreighoff, C., Quebec. Insects of all orders; pays particular attention to Lepidoptera (Heterocera) and Coleoptera.

Lawford, J. M., Toronto, Lepidoptera and Coleoptera.

Lawrason, W. L., Dundas Street, London, C. W., Lepidoptera and Coleoptera.

Morris, Beverly R., M. D., Institution for the Deaf and Dumb and the Blind, 490 Queen Street, Toronto. All orders, but chiefly Coleoptera and Lepidoptera.

Provancher, Rev. L., St. Joachim, Montmorency, C. E. All orders, except Aptera; pays special attention to Lepidoptera and Coleoptera.

Reed, E. Baynes, London, C. W., Coleoptera and Lepidoptera.

Reynolds, T., Financial Director, Great Western Railway, Hamilton, C. W., Lepidoptera.

Rooke, Capt. W. S., Scots Fusilier Guards, Montreal. Coleoptera and Diurnal Lepidoptera.

Saunders, William, Dundas Street, London, C. W. All orders, chiefly Coleoptera and Lepidoptera.

Turton, F., Simcoe Street, London, C. W. All orders, chiefly Coleoptera and Lepidoptera.

Rogers, Robt. V., Jr., St. James' Parsonage, Kingston, C. W.

Finally Messrs. Saunders, Bethune and Croft decided that the time had arrived to attempt to organize the entomologists of Canada. Invitations were issued to interested persons to meet in Toronto at the home of Professor Croft in the fall of 1862. Since only ten persons were present, it was decided to postpone organization until the following spring. Accordingly, another meeting was held on the 16th of April, 1863, in the rooms of the Canadian Institute in Toronto. Although only nine persons were present, it was decided to proceed with organization, since letters were received from several others supporting the plan.

After some discussion, the following resolution was passed: "That a society be formed to be called the Entomological Society of Canada, consisting of all students and lovers of entomology who shall express their desire to join it and conform to its regulations". A constitution was then adopted subject to later revision. Those present were Prof. W. Hincks and Prof. H. Croft of Toronto University, Dr. B. R. Morris, J. H. Sangster and J. Hubbert of Toronto, Dr. T. Cowdry and his son, N. H. Cowdry of York Mills, C. J. S. Bethune of Cobourg, and W. Saunders of London, C. W. Mr. Sangster was principal of the Normal School and Mr. Hubbert, who became the first curator of the society, was a student in Divinity. Letters offering support were received from S. Billings, Montreal, R. V. Rogers, Jr., Kingston, Thos. Reynolds, Hamilton, B. Billings, Prescott, Rev. V. Clementi, Peterborough, and E. B. Reed, London.

According to our financial records the following persons were in membership in the society as from April 16th, 1863. They are, therefore, the original members of the society: Rev. C. J. S. Bethune, B. Billings, E. Billings, Rev. V. Clementi, N. H. Cowdry, Dr. Thos. Cowdry, Prof: H. Croft, J. M. Denton, Miss Dewar, Prof. Wm. Hincks, Rev. Jas. Hubbert, Rev. G. M. Innis, W. O. M. King, W. L. Lawrason, Dr. B. R. Morris, E. Baynes Reed, Thos. Reynolds, Rev. J. H. Robinson, Robt. V. Rogers, Jr., Dr. J. H. Sangster, W. Saunders, and F. Turton.

Professor Hincks presided at the organization meeting and the following officers were elected: president, Professor Croft; secretary-treasurer, W. Saunders; curator, J. Hubbert. Doctor Bethune was married shortly after this meeting and went to England for about eighteen months, and on his return was elected secretary-treasurer of the society. Doctor Saunders became president. These two shared these offices for many years and also the position of editor of the society's journal some years later.

Members, other than those mentioned above, who were active in the work of the society in its earlier years, and many of whom held various offices, were Johnson Pettit, William Couper, G. J. Bowles, W. H. Ellis, W. H. Harrington, Dr. James Fletcher, Doctor Brodie, A. F. Winn, H. H. Lyman, Rev. Dr. T. W. Fyles, J. A. Moffat, John D. Evans, Doctor Woolverton, J. H. Bowman, A. H. Kilman, J. A. Balkwill, J. B. Williams, Rev. R. Burret, H. P. Bock, and Charles Chapman. In addition to these and many others, there should be mentioned, especially, three who are present this evening—Dr. John Dearnness, president 1895 to 1897, Dr. W. E. Saunders, who was secretary of the society from 1887 to 1905, and our president, Doctor Gibson, who first appeared in the minutes as director of Division Number Three in 1896.

In the year 1870 the society was asked by the Ontario Department of Agriculture to prepare a report on injurious insects. Doctor Saunders, Doctor Bethune and Mr. Reed prepared the material, and thus was issued in 1871 the first annual report of the society. These reports have continued since that time. The immediate result of the publication of this first report was that the Ontario Government gave the society an annual grant, and in accordance with this action, the society was incorporated by act of the legislature in 1871 as the Entomological Society of Ontario. Despite the name, the society, of course, has remained dominion-wide in work and membership.

The first annual grant to the society from the Provincial Government was for \$400, but as Dr. Bethune said in 1913, "happily for us the

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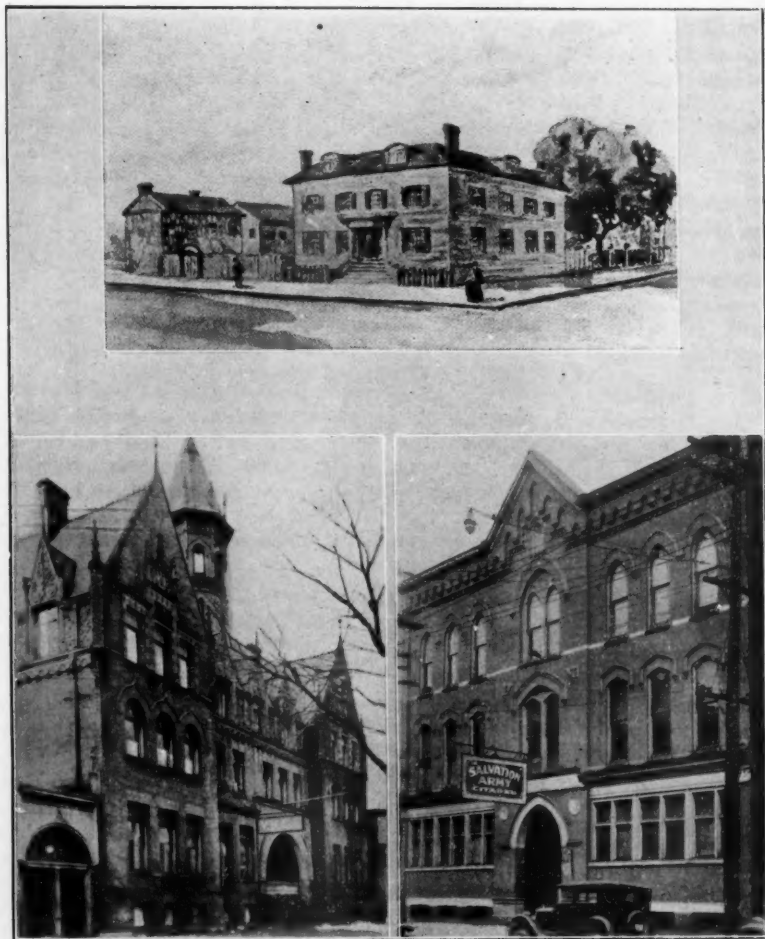
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PLATE 4



HEADQUARTERS OF THE SOCIETY

THE CANADIAN INSTITUTE, TORONTO, 1863-1872

Y. M. C. A. BUILDING, LONDON, 1896-1904. VICTORIA HALL, LONDON, 1879-1896

PLATE 5



HEADQUARTERS OF THE SOCIETY
HOME OF DR. WILLIAM SAUNDERS, LONDON
PUBLIC LIBRARY, LONDON, 1904-1906
BIOLOGICAL BUILDING, ONTARIO AGRICULTURAL
COLLEGE, GUELPH, 1906—

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society's fortunes were made by the advent of the Colorado potato beetle". The society was asked to advise the Government on this insect, and as a result of the report of Doctor Saunders and Mr. Reed, the grant was increased to \$1,000.

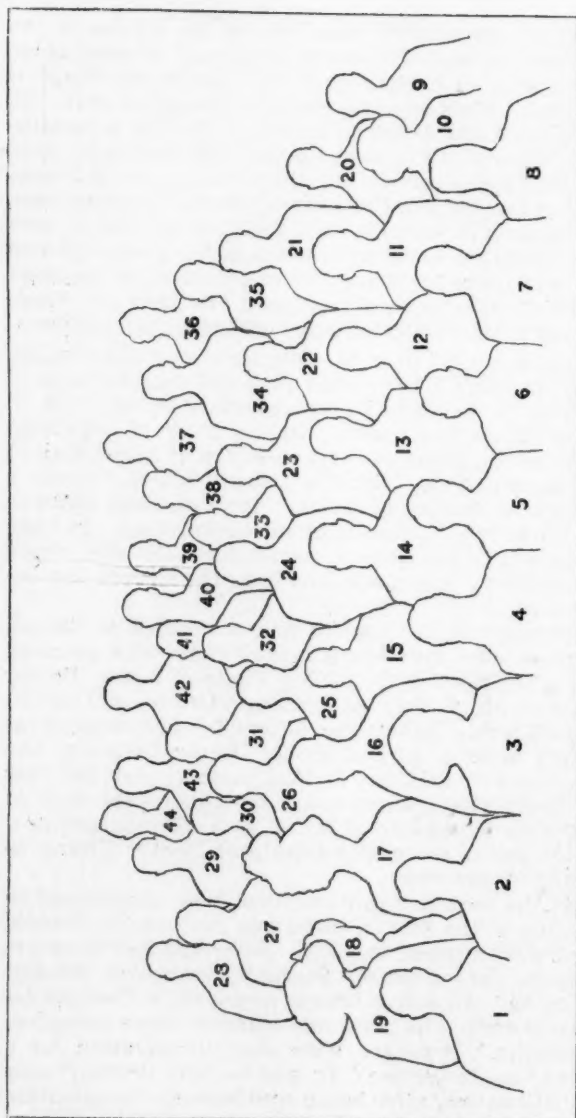
The first meeting of the society was held in the rooms of the Canadian Institute in Toronto, and the society continued to meet there until 1872. These rooms were in a building on the northwest corner of Richmond and Berti Streets. This building was demolished in 1876. In 1872 the society removed its headquarters to London and there it remained for thirty-four years. Several of the early London meetings were held in Dr. Saunder's home on Dundas Street, but the society secured rooms on the northwest corner of Dundas and Clarence Streets for headquarters. About 1879 rooms were secured in Victoria Hall, 394 Clarence Street, now the headquarters of the Salvation Army in London, and here the Society remained until a move was made in 1896 to more commodious quarters in the Y. M. C. A. building, 429 Wellington Street. In 1904 the headquarters were again moved to the Public Library building on Queen Street.

The rooms of the society were open to youngsters, as well as adults, who were interested in insects. I have fond personal recollections of many pleasant hours spent in the society's headquarters in the Y. M. C. A. and Public Library buildings in London. Of the group of boys who were welcomed there at the beginning of this century, it is interesting to record that W. R. Thompson of the Parasite Laboratory, at Farnham Royal, A. C. Baker of the U. S. Bureau of Entomology and Plant Quarantine, and myself, have all kept up active work in entomology. In 1906 the headquarters were moved to the Ontario Agricultural College, where special provision for the library was made, and here the society has remained for thirty-two years.

The fiftieth anniversary of the society was celebrated at Guelph in 1913. At that time there were still living four of those who attended the organization meeting on April 16th, 1863. Three of these, Doctor Saunders, living in London, Mr. E. Baynes Reed in Victoria, and Mr. N. H. Cowdry in Chicago, all wrote interesting letters for presentation at the meeting. The fourth member of the group, Doctor Bethune, was again president of the society in 1913 and in that capacity presided over the jubilee meetings. The sixtieth anniversary meetings were held at Ottawa in 1923 under the chairmanship of Mr. F. J. A. Morris, and now we meet again at Guelph under the chairmanship of Doctor Gibson to celebrate our seventy-fifth anniversary.

During the life of the society, branches have been established in a number of districts. One of the first of these was the London branch, established in 1864 and discontinued in 1881. After the headquarters were moved to London, the parent society gradually took over the activities of the London branch. An active branch operated in Toronto for many years, but discontinued when its place was taken by other biological and natural history societies. Branches were also in operation for a considerable time in Kingston, in Quebec City, and in Nova Scotia. Today the Montreal branch is still active, after being continuously in operation since 1873, and the British Columbia branch, through the British Columbia Entomological Society as an affiliated society, is still active.

We are glad to report that the early minute books of the society have been preserved in the library. They contain many interesting items. At the annual meeting on July 9th, 1867, the London branch reported that they had run a series of entertainments to pay debts for apparatus



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| 1. Prof. W. M. Wheeler | 12. Prof. P. J. Parrott | 23. Prof. E. M. Walker | 34. R. C. Treherne |
| 2. Rev. T. W. Fyles | 13. J. F. Brimley | 24. Prof. W. Lochhead | 35. Prof. T. J. Headlee |
| 3. Mrs. Comstock | 14. J. D. Evans | 25. Prof. J. Dearness | 36. W. A. Ross |
| 4. Rev. Prof. C. J. S. Bethune | 15. G. Meade-Waldo | 26. W. E. Saunders | 37. A. W. Baker |
| 5. Dr. C. G. Hewitt | 16. H. H. Lyman | 27. Dr. A. Cosen | 38. J. D. Tothill |
| 6. Prof. J. H. Comstock | 17. Mrs. Lyman | 28. J. J. DeVyer | 39. L. S. McLane |
| 7. Prof. F. M. Webster | 18. Miss Bethune | 29. H. Curran | 40. G. J. Spencer |
| 8. Dr. G. C. Creelman | 19. Mrs. C. G. Hewitt | 30. L. Caesar | 41. W. A. Clemens |
| 9. Prof. T. D. Jarvis | 20. A. Gibson | 31. R. S. Hamilton | 42. H. F. Hudson |
| 10. Mrs. Jarvis | 21. F. W. L. Sladen | 32. J. C. Chapais | 43. A. Burrows |
| 11. Dr. E. P. Felt | 22. Dr. R. S. MacDougall | 33. C. E. Petch | 44. G. E. Sanders |

10. Mrs. Jarvis
 11. Dr. E. P. Felt
 22. Dr. R. S. MacDougall
 33. C. E. Fitch
 41. G. E. Sanders

PLATE 6



THE FIFTIETH JUBILEE MEETING—1913



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and had given subscribers to these entertainments membership in the branch. The branch requested the parent society to accept a stated amount for dues of such members. After discussion the society agreed, but solemnly passed a motion of censure on the London branch for securing members in this manner.

Echoes of history are heard in a minute recorded at Toronto, June 1st, 1866, as follows: "A Field Meeting was held this day pursuant to notice. The only members present being Messrs. Saunders and Bethune—the Fenian raid preventing many members from taking part in it".

Present day members will be interested in a minute recording the council report presented at the annual meeting at Hamilton on September 26th, 1872. The minute in question is as follows: "Some of our members have expressed an opinion that the (Canadian) Entomologist is too exclusively scientific and that its pages have not been made sufficiently interesting to those amongst us who are at present only beginners in the study of the science".

A much discussed problem was dealt with at the annual meeting in 1864 in the account of which the following note appears: "A committee on the silk-producing moths of Canada was appointed with directions to collect information, make observations, and, if possible, conduct experiments on the different species of *Attacus* etc., and the possibility of utilizing their silk".

The minutes of the annual meeting for 1868 record a "Field Excursion and Pic Nic" held at London on July 8th, 1868. The day was spent in the field with lunch provided by the members of the London branch. After their return from the field, the members gathered at the home of Mr. Saunders in the evening. This gathering is of particular interest to us now because of the fact that a group photograph of those present was taken by Mr. Griffiths, and this is reproduced herewith.

At the annual meeting in London on July 17th, 1868, a resolution was recorded in the minutes establishing the publication by the society of a periodical to be known as the "Canadian Entomologist", which was to be issued gratuitously to members and sold on subscription to others. Thus was established the oldest entomological journal on the continent, which has been published regularly as a monthly journal since that time.

The annual meetings of the early days can best be described by Doctor Dearnness and Doctor Saundess who follow me. Within the time, however, of my own connection with the society there has been a great change in the character of the meetings. Those of years ago were characterized by fewer papers and a greater participation in the programme by amateur entomologists. Many of these men were born naturalists, and this characteristic is reflected in their writings. Their papers were also frequently masterpieces of English so that their reading was a delight to the listener. Good examples of these are the delightful papers of Doctor Fyles and of our good friend and still active member, Mr. F. J. A. Morris.

This sketch gives something of the early history of the society. Its later years have been active, but with them our present members are more familiar. We have grown until today we number nearly two hundred members, including most of the professional and amateur entomologists in Canada. Our annual report remains one of the most important contributions in the field of entomological literature, and the Canadian Entomologist is recognized as one of the leading entomological journals of the world with about six hundred copies going out each month,

not only to members of the society, but to subscribers in nearly all the countries of the globe.

ENTOMOLOGICAL MEMORIES*

BY DR. W. E. SAUNDERS

London, Ontario

Looking back to my earliest entomological recollections, I am struck with the number of noted entomologists that came to London to visit my father. Among the earliest of these was Augustus R. Grote, a rather dapper man of perhaps forty-five years, who visited us on several occasions. Another noted visitor was C. V. Riley who had an official position at Washington. Riley was a spare man of much good humor, and I well remember hearing him tell of being out in the western States at the time of a locust plague, and his glee as he told us of having eaten them and they were "not at all bad when fried". I wonder if they might have been as good as that mouse of the genus *Peromyscus* that fell to my portion a few years ago. Deer mouse is much like refined lamb.

For the first world's fair, the Centennial, at Philadelphia in 1876, two noted Canadian entomologists stayed at our house for many weeks while they prepared a fine collection for the society's exhibit from the private collections of the members, Johnson Pettit of Grimsby and the Rev. Robert Burnett, who afterwards preached in the "Pepper Box" church in London. These men were both enthusiastic chess players, and our board was often kept busy for days on end while they might make a few moves before breakfast, more at noon, and even more in the evening.

The first entomological trip that I remember was about 1874 when Mr. E. Baynes Reed accompanied my father and myself to Amherstburg to see and report on the first invasion of Colorado potato beetles to reach Canada. We found the rumour of their arrival to be correct, and not long afterwards every potato grower became well acquainted with them. The first entomological picnic held near London about 1868 must have been for me just one more outing with my father, because it made no lasting impression on my mind.

My father was at this time, as later, the moving spirit of the Society in London, and I have a good recollection of the meetings in the seventies at which I got to know the local members very well. It has always been a source of surprise to me that one man could influence so many to take up the study of insects, but they seemed to develop a good deal of enthusiasm, and John M. Denton, the merchant tailor, had a fine collection, while Chas. Chapman, bookbinder, whose place of business still bears his name and is in the same building as then, H. P. Bock, also a bookbinder, John T. Balkwill, a bookkeeper who seemed to have enthusiasm for any branch of natural history provided that he had a good companion for his walks, and the late Dr. Jas. H. Bowman and many others; all followed the study of insects with a good deal of interest.

In those days London was a small city and we could reach the country by a moderate walk, which was our usual method of travel. The railway enclosure was at that time allowed to grow up to shrubs and flowering plants of various kinds, and my father's plan was to attack such plants with a stick and umbrella, carefully scrutinizing the booty in the umbrella after a thorough beating of the foliage. Many were the

*Address delivered at the seventy-fifth annual meeting of the Entomological Society of Ontario.

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PLATE 7



FIELD DAY OF THE TORONTO BRANCH, 1896

Upper row, left to right—S. R. Carter, T. G. Priddey, E. V. Rippon, J. H. McDunnough
Lower row, left to right—Arthur Gibson, A. Klinghorn, A. J. Cherry

PLATE 8



FIELD EXCURSION, LONDON, ONTARIO, ANNUAL MEETING, JULY 8th, 1868.

The accompanying photograph is the oldest picture of a Canadian entomological gathering. Sitting upright on the fence is William Osler, later Sir William Osler, Regius Professor of Medicine at Oxford University. Reclining on the fence is E. Baynes Reed, one of the original members of the Society. Reading from left to right are Mr. Symonds, afterwards a druggist in London; C. Chapman, bookbinder, London; J. M. Denton, London; the Rev. C. J. S. Bethune; William Saunders, and, standing in front of him, his son, W. E. Saunders; J. H. Sangster; his son; Professor Henry Croft, first president of the Society; the Rev. R. H. Starr. Sitting on the ground are J. Watterman and C. Symonds.



trophies we brought home to be reared, and a great deal of father's time was spent in describing the early stages of our captures. Caterpillars would, of course, be raised to maturity and copious notes made about their changes, feeding, etc. It was his custom to spend the early part of most mornings carefully writing such descriptions, many of which were later published in the Canadian Entomologist. Our morning excursions into the country occurred nearly every week when circumstances permitted, although he was at that time a man of prominence in pharmaceutical circles and for a time president of the American Pharmaceutical Society, and was also engaged in planting and caring for a farm of seventy-five acres on which he intended to make fruit the main crop. After a time he found that a farm of that size was too much of a drain on both time and finances, and he sold it and purchased six acres west of the city designed for experimental purposes only, on which costs were not to be an item of consideration. On that place he spent many happy hours preparing himself, as it turned out, for the position of Director of Experimental Farms to which he was appointed in 1886.

When my father published his book "Insects Injurious to Fruits" he had in mind another book dealing with insects injurious to field crops, and he had a blank book prepared in his usual thorough manner which was so titled. As time went on and he secured items that should go in such a book, he entered them in their proper place in the volume. This did not progress very far, probably because he never succeeded in getting the time to complete it. I have this book with me, and if you care to accept it, Mr. President, I would like to present it to the Society as a memento of one of its founders.

REMINISCENCES OF THE EARLY DAYS OF THE SOCIETY*

BY DR. JOHN DEARNESS

London, Ontario

The lateness of the hour will prevent my taking time to add to Professor Baker's admirable history many personal recollections of the founders of the Society and of its early activities. Dr. W. E. Saunders, the secretary for a number of years, and I belong to the second generation of active members; however for a period of fifteen or more years we were associated with the pioneers who well and truly laid the foundation of the Society.

Four of them, probably more, but four at least, will never lack a place in the history of this Society, or indeed in the history of entomology in Canada. Dr. William Saunders, C. M. G., F. R. S. C., F. L. S., etc. will always be mentioned first. As you have just heard, his vocation as a young man was that of pharmacist and chemist; his avocation was horticulture which he pursued with greater zeal in the developing and breeding of ideal fruit-bearers than in immediate market returns. Here too, he met the insect predators and these he studied no less zealously. This varied experience started him on the road that led to his deserved reputation of being the father of Canadian economic entomology. In this field, no other Canadian is, or has been, so widely known and honoured. If a list of his experiments and researches were published, it should include that two or three years before he went to Ottawa, he made a solution of lime and sulphur for plant protection against parasites. In,

*Address delivered at the seventy-fifth annual meeting of the Entomological Society of Ontario.



1. J. M. Swaine
2. H. L. McIntyre
3. E. P. Felt
4. Frank Morris
5. C. E. Atwood
6. A. F. Burgess
7. J. D. Evans
8. C. H. Hadley
9. C. Macnamara
10. L. S. McLane

11. A. B. Klugh
12. Arthur Gibson
13. E. M. Walker
14. L. Caesar
15. C. H. Curran
16. W. Lochhead
17. W. A. Ross
18. C. R. Twinn
19. H. S. Fleming
20. J. D. Tothill

21. A. Finnamore
22. F. H. Grindley
23. W. St. G. Ryan
24. R. C. Treherne
25. J. H. McDunnough
26. H. F. Hudson
27. N. Griddle
28. W. H. Brittain
29. C. B. Hutchings
30. H. L. Viereck

31. G. Maheux
32. G. E. Sanders
33. C. E. Peich
34. H. G. Crawford
35. A. Kelsall
36. M. B. Davis
37. W. N. Keenan
38. M. D. Leonard
39. A. B. Baird

PLATE 9



THE SIXTIETH ANNIVERSARY MEETING—1923



I think, 1883 or 1884 he gave me an eight ounce bottle of this solution with the request that I experiment with it on the arrest or eradication of black-knot on plum or cherry trees. He said at the time that he had no black-knot in his own orchard. It was about 1900 when I next heard that a lime-salt-sulphur solution was being used in California against San Jose scale with some success. Later, the salt factor was dropped, thus bringing the insecticide to the Saunder's solution.

At the earliest meetings which I remember, the Rev. Dr. Chas. J. S. Bethune, F. L. S., F. R. S. C., was the leading systematist. He seemed to know the scientific name of every insect that was submitted to him. His enthusiasm brought him to every meeting all the way from Port Hope, where he was for a time principal of a boys' college. One of his boys that he brought with him to one meeting was William Osler who became the celebrated Sir William Osler of Oxford University. When trying to interest the first-year medical students in biology, I used to tell them how Sir William laid the foundation in part of his wide training in the study of insects. I treasure a note that Doctor Bethune sent me in his beautiful writing about the time of his eighty-eighth birthday in which he stated that, although his sight and hearing were much impaired, he was otherwise **very well**. He was then the oldest living graduate of Trinity College, founded in 1852.

Dr. James Fletcher, F. L. S., F. R. S. C., deserted banking at the first opportunity to earn his living in the service of general science. I think entomology was his chief affection, but he was interested in the other natural sciences. As a teacher and lecturer, I would award him the palm. It was a pedagogical treat to see him fan an entomological spark in a boy's interest in an insect into a glowing fire. I always think of our eminent president, Dr. Arthur Gibson, as one of the Fletcher-made entomologists.

The Rev. Dr. Thomas W. Fyles, F. L. S., although not a resident of Ontario, was one of the most regular and most enthusiastic attenders, and at nearly every meeting the member who travelled farthest to be present. His home was 180 miles east of Montreal. He was less interested in the name than in the life of an insect. He could see and show us its beauty. With voice or pen or brush, he always pleased as well as instructed. As a literary artist, Mr. Morris of Peterborough might be named as his successor. During the years of their active membership, valuable entomological papers by these four men appear in every annual report.

Favourably seated this afternoon for viewing the audience as well as the speakers, I could not help comparing this meeting with those I attended between forty and fifty years ago. During these and later years, my hobby interest widened to include fungi. Indeed, there is hardly a gap between entomology and mycology; many insects are mycophagists and many fungi are entomophagists. I have fed a larva through its instars to pupation on the destroying angel or death-cup, *Amanita verna*, and then sent it to the chairman's care. Mr. de Gryse pronounced its imago a healthy *Chytonix palliatricula*. A *Septobasidium* may build a comfortable shelter over a *Chionaspis* and later feed upon the insect offspring. Dr. Roland Thaxter published over 1,000 pages of print and hundreds of drawings relating to the taxonomy of fungi that inhabit insects.

To return to the comparison, the Society is to be congratulated on its progress and the success of this anniversary meeting. The attendance is more than fourfold of what it was at the end of its twenty-fifth year. I recall that two of the members were then professional entomologists, that is to say their duties or work was chiefly entomological; the others were amateurs in the sense of being lovers of entomology; it was their play. To-day the proportion seems to be reversed. Doubly happy the worker whose remunerated work is real play.

At that time the members sat around tables partly covered with books, reports, and cigar boxes, but not a single puff of smoke was noticed in a three-day meeting. The cigar boxes floored with cork, if not empty, contained only pin-pierced insects.

Lantern slides were known to exist and were sparingly used at a few of the meetings; action pictures were unheard of. Today, projections of graphs, statistical tables, still life or moving life pictures illustrated and impressed nearly every paper; living microscopic organs in active functioning enlarged many times were as distinctly visible as one's hands and feet. Seeing the magnified, coloured motion pictures put on the screen by Doctor Melander was well worth any one's trip. An observer who could watch with untouched feeling the writhing larva, whose vital organs were being savagely torn out and devoured by the tightly grasping mantis, must be devoid of emotion. These were no mere pictures of "mickey-mouse" tricks; there could be no doubt of their commonplace realities in insect life.

The general character of the former programmes put emphasis on the morphology and identification of insects, although the papers published in the annual reports were chiefly economic. The specimens contained in the said cigar boxes were brought for comparison and identification or used as object lessons. Sometimes the teacher-pupil atmosphere prevailed; now the papers and discussions are more than ninety per cent economic and the atmosphere is that of a conference of workers helping each other to solve common problems and discover ways to overcome common difficulties.

In those distant days, the chairman's hair, like my own and the former secretary's, was dark and in sufficient quantity to give the barber a proper job. Grey streaks and bare crowns were in the majority, which may account for the ripe experience and wisdom embedded in the old annual reports. Today I noticed the prevalence of the dark colour. Look around this well-filled banqueting room and over these well-filled entomologists. How many heads do you see in the almond-blossom stage? Besides the three I mentioned, I count only two more. Youth and vision are evidently in the saddle. May you all be able and willing to attend the centennial anniversary in 1963. No doubt there will still be insects to study and to fight. I wonder whether the sawfly and the white grub, the army worm and the corn borer, will be by that time defeated and forgotten.

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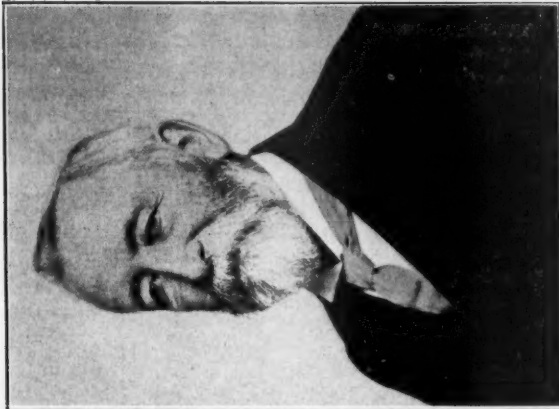
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PLATE 10



WILLIAM SAUNDERS



THE FOUNDERS OF THE SOCIETY
CHARLES JAMES STEWART BETHUNE



HENRY HOLMES CROFT

THE FOUNDERS OF THE SOCIETY

BY A. W. BAKER

Ontario Agricultural College, Guelph.

CHARLES JAMES STEWART BETHUNE, M. A., D. C. L.

Charles James Stewart Bethune was born on his maternal grandfather's farm in West Flamboro Township, Upper Canada, on August 12th, 1838. He was the son of the Rev. Alexander Neil Bethune, second Bishop of Toronto.

Doctor Bethune had a distinguished career in the church, in education, and in entomology. He graduated from Trinity College in 1859, at the age of twenty-one, with first class honours in classics and mathematics. He received his M. A. degree in 1861 and the degree of D.C.L. in 1883.

After spending nine years in the Anglican priesthood, he became head-master of Trinity College School, Port Hope, in 1870. He remained in this position until 1899. During those years he built the school, rebuilt it after it was destroyed by fire, and made it one of the great boys' schools of Canada.

In 1906 Doctor Bethune accepted the Chair of Entomology and Zoology at the Ontario Agricultural College. For fourteen years he remained head of this department, retiring in October, 1920. During his term of office the work of the department developed greatly, and many students passed through his hands who have since done outstanding work in entomology.

All his life Dr. Bethune had been actively interested in entomology. It was this interest which, in young manhood, brought about his friendship with Professor Croft and Doctor Saunders and so lead to the formation of our society.

Many honours came to Doctor Bethune from other scientific societies in various parts of the world. He was a fellow of the Royal Society of Canada and president of Section IV in 1900. He was a fellow of the American Association for the Advancement of Science and of the Entomological Society of America, and president of the latter society in 1913. He was honoured by election to Corresponding Membership in many societies.

Doctor Bethune published a large number of articles on systematic and economic entomology, especially in the Canadian Entomologist and Annual Reports of the Entomological Society of Ontario. He published a number of bulletins on injurious insects and for years prepared the Annual Bibliography of Canadian Entomology for the Transactions of the Royal Society.

After his retirement in 1920, Doctor Bethune removed to Toronto where he lived quietly until his death on the 18th of April, 1932.

WILLIAM SAUNDERS, C. M. G., L. L. D.

William Saunders was born in Devonshire, England, and came to Canada with his parents when a boy of twelve. He obtained a technical training in chemistry and established himself in business as a retail, and later wholesale, druggist in London.

For the twenty-five years in which Doctor Saunders carried on this business, he maintained an active interest in entomology, botany, and horticulture. He established a farm of his own near London and took an active part in the Ontario Fruit Growers' Association, of which he was president from 1882 to 1885. The breadth of his interests and activities are shown by the other offices which he held. He was Professor

of *Materia Medica* in Western University, Public Analyst for Western Ontario, and president of the Ontario College of Pharmacy, of which he was one of the founders. He was a fellow of many scientific societies in Canada, the United States, and Great Britain. In 1881 he was appointed by the Governor-General, the Marquis of Lorne, to be one of the original fellows of the Royal Society of Canada, and he later became president. He received honorary degrees from the Universities of Queens and Toronto, and in 1905 was made a Companion of the Order of St. Michael and St. George by His Majesty King Edward.

In 1886 he was appointed director of the Experimental Farms of the Dominion and removed to Ottawa to begin his new work. Doctor Saunders not only laid the foundation of the Experimental Farms System as it is today, but for twenty-five years he guided and developed the work of this branch of the Dominion Department of Agriculture. Canadian agriculture owes him a deep debt of gratitude.

Doctor Saunders contributed many papers on entomology to the pages of the *Canadian Entomologist* and the Annual Reports of our Society. He was the author of many bulletins and reports in various fields. One of his most notable contributions was his "Insects Injurious to Fruits" published in 1883 and followed by a second edition in 1892.

Doctor Saunders resigned the directorship of the Experimental Farms in 1911. He lived for the few remaining years of his life at his old home in London where he died on the 13th of September, 1914.

PROFESSOR HENRY CROFT, D. C. L., F. C. S.

Henry Holmes Croft was born in London, England, in 1820. His father was Deputy Paymaster-General in the Ordinance Department. He had an early boyhood interest in chemistry, and although he spent a year in his father's office after leaving school at Tavistock House, the work never became congenial. On the advice of Professor Faraday he was sent to study chemistry at the University of Berlin and left there with honours after three and a half years. When the University of King's College, Toronto, now the University of Toronto, was established, young Croft, on the advice of Faraday and others, was appointed to the Chair of Chemistry and Experimental Philosophy. He was then but twenty-two years of age. He arrived in Toronto in January, 1843, and thus began a period of thirty-six years service to education in Canada.

Professor Croft not only proved to be an able and inspiring teacher but he was responsible for the development of much of the technique in research and analysis. He was a leader in university affairs and was appointed vice-chancellor in 1849. He organized "The University Rifle Corps" which became a company of the Queen's Own Rifles. As Captain, Professor Croft led this company at the battle of Ridgeway during the Fenian Raid when several of its members were killed or wounded. Professor Croft took an active part in the work of various organizations other than the Entomological Society. He was one of the early leaders in the Canadian Institute, now the Royal Canadian Institute, was twice president and for many years a member of its council.

Professor Croft resigned from the university faculty in 1879 and removed with his family to Las Hermitas, near San Diego, in Texas. Here he died on March 1st, 1883. Seven years later, a Protestant Episcopal Church was erected in San Diego by his children as a memorial to their father and mother. Professor Croft's name is commemorated at the University of Toronto by his portrait in the Senate Chamber and by Croft Chapter House which was his laboratory for many years.

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PLATE II



PAST PRESIDENTS OF THE SOCIETY

Prof. Henry H. Croft, Dr. William Saunders, Rev. Dr. C. J. S. Bethune
 Dr. James Fletcher, W. Hague Harrington, Dr. John Dearness
 H. H. Lyman, Dr. T. W. Fyles, Prof. William Lochhead
 J. D. Evans, Prof. T. D. Jarvis, Dr. E. M. Walker

PLATE 12



PAST PRESIDENTS OF THE SOCIETY

Dr. C. Gordon Hewitt, A. F. Winn, Prof. L. Caesar

Dr. Arthur Gibson, F. J. A. Morris, Dr. J. M. Swaine

Rev. Father Leopold, Prof. A. W. Baker, Dr. J. D. Detwiler

Dr. W. H. Brittain, W. A. Ross, L. S. McLaine

PAST OFFICERS OF THE SOCIETY

PRESIDENTS

Prof. H. H. Croft—1863 to 1864, 1868 to 1871
Dr. Wm. Saunders—1864 to 1865, 1876 to 1887
Rev. W. Hincks—1865 to 1868
Rev. Dr. C. J. S. Bethune—1871 to 1876, 1890 to 1893, 1912 to 1913
Dr. James Fletcher—1887 to 1890, 1907 to 1909
W. Hague Harrington—1893 to 1896
Dr. J. Dearness—1896 to 1898
H. H. Lyman—1898 to 1900
Rev. Dr. T. W. Fyles—1900 to 1903
Prof. Wm. Lochhead—1903 to 1905
J. D. Evans—1905 to 1907
Prof. T. D. Jarvis—1909 to 1910
Dr. E. M. Walker—1910 to 1912
Dr. C. Gordon Hewitt—1913 to 1915
Albert F. Winn—1915 to 1917
Prof. L. Caesar—1917 to 1919
Dr. Arthur Gibson—1919 to 1921, 1937 to 1938
F. J. A. Morris—1921 to 1923
Dr. J. M. Swaine—1923 to 1925
Rev. Father Leopold—1925 to 1927
Prof. A. W. Baker—1927 to 1929
Dr. J. D. Detwiler—1929 to 1931
Dr. W. H. Brittain—1931 to 1933
W. A. Ross—1933 to 1935
L. S. McLaine—1935 to 1937

SECRETARIES

Dr. W. Saunders—1863 to 1864
Rev. C. J. S. Bethune—1864 to 1871
E. Baynes Reed—1871 to 1874, 1881 to 1888
Jas. Williams—1874 to 1875, 1878 to 1879
J. H. McMechan—1875 to 1878
Jas. H. Bowman—1879 to 1881
W. E. Saunders—1888 to 1906
L. Caesar—1906 to 1908
J. E. Howitt—1908 to 1911
A. W. Baker—1911 to 1926
R. H. Ozburn—1926 to 1938

CURATORS

James Hubbert—1863 to 1865
Robert V. Rogers—1865 to 1868
W. H. Ellis—1868 to 1869
W. Osler—1869 to 1872
H. S. Saunders—1888 to 1889
J. A. Moffat—1889 to 1905
Rev. C. J. S. Bethune—1905 to 1907
J. E. Howitt—1907 to 1909
L. Caesar—1909 to 1912
G. J. Spencer—1912 to 1916, 1920 to 1922
W. G. Evans—1917 to 1918
Eric Hearle—1918 to 1919
J. A. Flock—1922 to 1926
Miss Rose King—1926 to 1931

A SHORT HISTORY OF THE MONTREAL BRANCH

H. A. U. MONRO,

Montreal, P. Q.

One day during the summer of 1873, five ardent entomologists resident in the city of Montreal were separately engaged in collecting specimens of their favourite orders on the woody slopes of Mount Royal, in those days far removed from the city itself. Meeting in the course of their rambles, these amateurs joined together to pursue their hobby, and in this way the formation of a Montreal branch of the Entomological Society of Ontario was discussed and finally arranged.

The leader of this original group was William Couper, an outstanding naturalist, who had previously resided in Toronto and the city of Quebec. He was once credited by the Rev. C. J. S. Bethune as being one of the original Canadian naturalists to inspire an interest in entomology.

Before 1873, Couper had been contributing regularly to North American scientific publications. Articles by him appeared in the second volume of the Canadian Naturalist and Geologist, which first appeared in 1857, and in the first number of the Proceedings of the Entomological Society of Philadelphia in 1861. It is thus apparent that Couper was a pioneer of entomology among the English speaking population of Canada. The Montreal Branch was indeed fortunate to have him as its first president. Also present at this meeting was an associate of Couper, G. J. Bowles, who had collected with Couper in Quebec City and whose interest had been stimulated in 1863 by the finding of the cabbage white butterfly, *Pieris rapae* Linn., but recently introduced into North America near this place.

The first regular meeting of the Branch was held October 16th, 1873, with nine original members. The group is thus the third senior surviving entomological society on the North American continent antedated only by the American Entomological Society of Philadelphia and the parent Entomological Society of Ontario. By the end of the first session, the membership had increased to thirteen. From that year until the present sixty-fifth year of the Branch, the membership and interest has been steadfastly maintained. The number of members has never been large, rarely exceeding twenty in any given year, but all have been keen devotees of entomology. Usually eight or nine monthly meetings are held each year and the 536th gathering was recently observed.

Apart from their activities as collectors, the early members often played a utilitarian rôle by giving advice on economic entomology to farmers and other persons affected by injurious insects. In those days, before the era of state support of economic entomology, these amateurs made a useful contribution to the study of economic problems, and it is fitting to acknowledge their work at this time.

In 1875 Henry H. Lyman joined the Branch and was actively associated with the Society for nearly forty years, his work being terminated by his loss in the "Empress of Ireland" disaster in the River St. Lawrence on May 29th, 1914. Lyman was our most widely known member, travelling extensively on this continent and in Europe, attending conventions and meeting entomologists. He was president of the parent Society on several occasions. His bequest for the maintenance of the Lyman collection of insects and the Lyman library of books on

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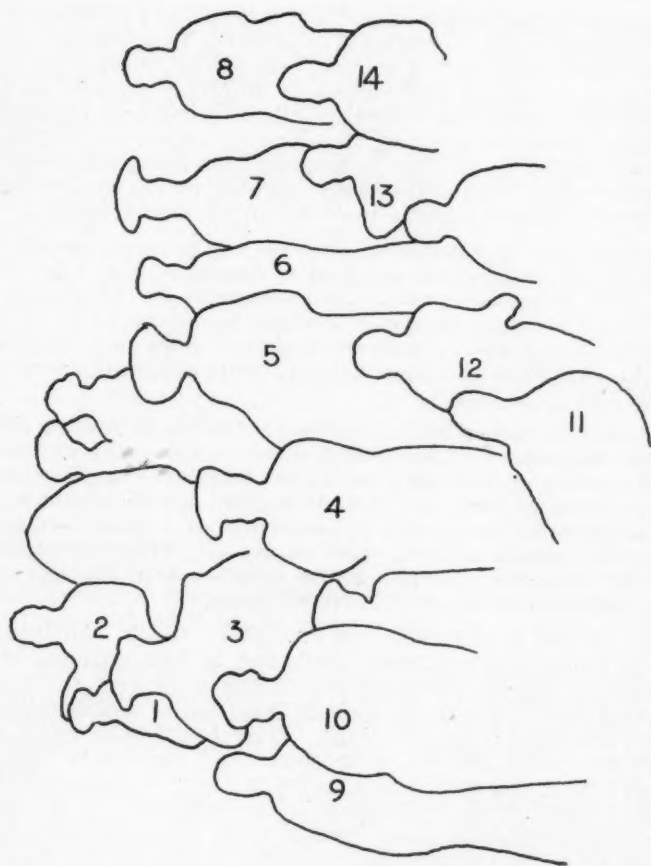
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PLATE 13



FIELD DAY, MONTREAL BRANCH, ST. HILAIRE, QUEBEC, MAY 24, 1905



10. Mrs. G. A. Southee
11. Charles Stevenson
12. G. A. Moore
13. T. S. Robinson
14. G. Chagnon

6. E. C. Barwick
7. Mrs. A. F. Winn
8. A. F. Winn
9. G. A. Southee

1. Arthur Denny
2. G. R. Southee
3. Miss Charles Stevenson
4. Mrs. Charles Stevenson
5. Miss M. Barwick

entomology has been largely instrumental in the maintenance of our Branch on an active and useful footing.

After the death of Lyman, leadership of the club was taken over by the late Albert F. Winn, who was named curator of the Lyman collection. Winn added considerably to the number of insects in this collection. Winn ably carried on the traditions of the Society, and several excellent amateur entomologists were trained by him. He was twice President of the parent Society, in 1915-1916 and 1916-1917. He died in 1935.

In addition to the workers mentioned above other members of the Society contributed greatly to the knowledge of the local fauna. Among them may be mentioned F. B. Caulfield, one of the original members, who published a list of the Lepidoptera of Montreal as early as 1875. Lachlan Gibb, who collected widely in the Lepidoptera, returned to England shortly before his death in 1922, and his collection of Canadian insects was presented to the South London Entomological Society of England. Gibb was a very enthusiastic member of the group and did much to further its interest during the years of his membership.

The parent Society has met in Montreal on two occasions, the first in 1882 when the annual meeting was held on August 24th, and the second on November 8th, 1898, when our Branch celebrated its twenty-fifth anniversary. This was a most successful meeting, held under the presidency of H. H. Lyman. As far as can be ascertained there were only two present members of the Society at this meeting forty years ago, in the persons of Dr. A. Gibson and G. A. Moore.

Unfortunately, Mount Royal is no longer the happy hunting ground of the local entomologists. The gradual encirclement of the city streets and constant burning over of the ground has affected the fauna considerably. The presence of large numbers of people, and the somewhat intensive but uncalled for supervision by police, mounted or on foot, proves embarrassing to even the most ardent collectors. Happily, there are many excellent collecting grounds within easy reach of the city, lying for the most part off the Island of Montreal itself.

Of the present membership our President, G. T. Moore, has specialized in Hemiptera for many years and is now engaged in the preparation of a list of this order for the Province of Quebec. G. Chagnon has commenced publication in the French language of a comprehensive work on the Coleoptera of the Province. Frère Jos. Ouellet has a large collection of the local Diptera, Hemiptera, and Coleoptera and has specialised chiefly in the latter order. Abbé O. Fournier has studied the Simuliidae and latterly the Trichoptera of the Province. J. W. Buckle has collected Hymenoptera for many years. Dr. E. G. Grieve has published on the biology of the Odonata and is continuing studies in this order. G. H. Hall has made a special study of insect and bird photography and has produced excellent work. The Lepidoptera have been intensively collected by A. C. Sheppard and E. Munroe, while the latter worker has collected this order in the West Indies. W. St. G. Ryan, N. P. Beaudoin, N. Cameron, and the writer are interested in various phases of economic entomology.

Of former active members now resident elsewhere, mention should be made of J. I. Beaulne, now living in Quebec City, who has contributed to the knowledge of Quebec Coleoptera, and of Dr. G. H. Fisk, now in Nigeria, who made valuable studies of Canadian mosquitoes.

THE ENTOMOLOGICAL SOCIETY OF BRITISH COLUMBIA

BY GEO. R. HOPPING,

Vernon, B. C.

The Entomological Society of British Columbia was founded January 8th, 1902, by a small but ardent group of entomologists living in the environs of Vancouver and Victoria. The original document of organization came to the writer's hand only a year ago from Mr. W. Downes of Victoria, who in turn received it from Mr. Francis Kermode, Director of the Provincial Museum. It was found among some old papers of the museum. This document consists of a portion of a sheet of foolscap on one side of which is set forth the names of the first officers and the purpose of the Society, namely:

"The Work of the Society shall include all branches of the Science of Entomology."

Upon the other side appears a list of charter members of the Society as follows. E. Anderson, Victoria; A. H. Bush, Fairview; W. A. Dashwood-Jones, New Westminster; Miss O. De Wolf, Vancouver; A. W. Hanham, Victoria; R. V. Harvey, Vancouver; Rev. G. W. Taylor, Wellington; L. D. Taylor, Vancouver; E. Wilson, Vancouver; T. Wilson, Fairview.

The first president of the Society was Reverend G. W. Taylor, of St. Mathews Rectory, Wellington. Mr. G. O. Day, in his Presidential address of 1914 said of him. "All records point to one man, the late Rev. George W. Taylor, F. R. S. C., F. Z. S., as the first active entomologist in this Province. He settled on Vancouver Island about the year 1877 and studied for the ministry. In 1881 he was made a Fellow of the Royal Society of Canada, obtaining this honour largely through his interest in entomology. During the next few years, Mr. Taylor proved himself an active collector and a keen student in the order. At the annual meeting of the Entomological Society of Ontario, held in London, Ontario, October 15th, 1884, he presented the Society with a collection of Diurnal Lepidoptera through the medium of Mr. James Fletcher." Reverend Taylor was largely responsible for the establishment of the marine biological station at Departure Bay, near Nanaimo, in 1908, and was the first director of the station from its inception until his death in 1912.

The first secretary-treasurer of the Entomological Society of British Columbia was Mr. R. V. Harvey, of Queens School, Vancouver. Throughout the early "Proceedings" are many evidences of the fine attributes of this gentleman and his untiring efforts on behalf of the Society.

The Society was active and strong from its inception in 1902 until April 16th, 1908. A new interest was kindled on March 29th, 1905, by a circular letter sent by the secretary, Mr. Harvey, stating that the Entomological Society of British Columbia had been duly affiliated with the Entomological Society of Ontario. After 1908, no meetings appear to have been held for three years and interest waned, not in entomology, as Mr. Tom Wilson pointed out, but in the Society. A new wave of enthusiasm took place in 1911 owing to the energy and enterprise of Mr. R. C. Treherne, a man of dynamic but charming personality. He called a meeting in December, 1911, at Aberdeen School, Vancouver, at which seventeen regular members were in attendance and various papers read. The present vigorous condition of the Society is due in no small measure to the timely effort of Mr. R. C. Treherne.

Upon the death of Reverend Taylor, Mr. Tom Wilson held the office of president until the meeting in January, 1913. Mr. Wilson was born at Musselburgh, Scotland, in 1856. As a young man he studied horticulture and forestry and then went to India at the age of twenty-four. Here he had charge of tea plantations in lower India and in Burma. After six years in the tropics, he returned to Scotland but set sail soon afterward for Canada. For a time he was employed on construction work of the Canadian Pacific Transcontinental Railway and he used to remark that "he walked into British Columbia before the railway was completed". From this time on he remained in British Columbia and was always an ardent supporter of the Entomological Society. In 1896 he was appointed Fruit Inspector in the Provincial Department of Agriculture. In 1900 he entered the Dominion Service as Superintendent of Fumigation and in 1906 the Inspectorship of Indian Orchards was added to his duties. Mr. Wilson lost his life in an hotel fire at Hope on March 6th, 1917. Mr. R. C. Treherene said of him, "His intimate knowledge of our birds, mammals, plants and insects was nothing short of marvellous, and it was conceded by all who knew him that he represented the best type of field naturalist the Province has enjoyed for a great many years."

The Society experienced a very active life from 1911 to 1914, and then the effects of the war began to be apparent. Members were called overseas and our first secretary, Captain R. V. Harvey, was wounded and taken prisoner at Festubert, subsequently dying of his wounds in Germany. There were three presidents who guided the Society through this difficult time from 1913 to 1918. Mr. G. O. Day who now resides at Duncan, Vancouver Island, held the presidency from 1913 to 1915 inclusive, Mr. E. H. Blackmore during 1916 and 1917, and Mr. R. S. Sherman in 1918. Both Mr. Day and Mr. Blackmore were Lepidopterists of considerable note. The latter prepared one of the most complete collections of Microlepidoptera of British Columbia. After the death of Mr. Blackmore in 1929, his large collection was acquired by the University of British Columbia. Mr. Blackmore again held the presidency during 1919 and 1920.

In 1921 Mr. L. E. Marmont of Maillardville became president and held the office for five years. At the last annual meeting held in February, 1938, the members again had the pleasure of greeting Mr. Marmont, one of the older and beloved members of the Society. From 1920 to the present time, the Society has been in fairly robust health and during the past decade, particularly, has come to be one of the foremost scientific bodies in the Province. In September 1923, the Society took another step forward when it became incorporated under the Societies Act of British Columbia. Mr. J. W. Winson of Huntingdon occupied the presidential chair from 1926 to 1932 inclusive. He is a man of considerable attainments as a naturalist and edits an enjoyable column on natural science in one of the Vancouver papers. From 1933 to 1935 inclusive, Mr. W. Downes ably piloted the organization. Mr. Downes is doing entomological work at Victoria and has a particular interest in the Hemiptera. At the annual meeting in 1936, Mr. Ralph Hopping was elected President. He has recently retired after long service as a forest entomologist in the Dominion Entomological Branch. His particular interest in systematics lies in the Coleoptera of which he has a collection ranking among the first five on this continent. In 1937 the chair was occupied by Mr. E. R. Buckell, a keen Orthopterist who represented Canada at the International

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THE BRITISH COLUMBIA ENTOMOLOGICAL SOCIETY MEETING, JANUARY 9, 1913

Standing, left to right—G. O. Day, G. E. Wilkerson, W. H. Brittain, W. H. Lyne, L. E. Taylor,
C. H. Blackmore, A. H. Bush, C. O. Raynor, H. W. Collins, J. Davidson, E. D. Smith,
M. S. Middleton.

Seated, left to right—T. Cunningham, J. R. Anderson, Tom Wilson, R. C. Treherne, S. Hadwen.

Conference for Anti-locust Research held in Cairo, Egypt, in 1936. He has prepared a very good collection of the Orthoptera of British Columbia and has done some excellent work on the control of grasshoppers on stock ranges.

The man who is president at time of writing is Mr. E. P. Venables of Vernon. Mr. Venables has had long service in fruit insect work and has been a member of the Society since the early years. It is to Mr. Venables the writer is indebted for many reminiscences of the early days. He has related how Captain R. V. Harvey walked into the Okanagan Valley over the old Hope-Princeton trail in 1906, and how he spent many congenial hours with Harvey, collecting at the head of Okanagan Lake. It is also related that one of the charter members, Mr. A. H. Bush, a locomotive engineer by profession, used to proceed down the main streets of Vernon with a perfectly huge insect net, beating the shade trees along the way, much to the bewilderment and sometimes amusement of the townspeople. Is perusing the old files and papers of the Society, many interesting details have come to light which space does not permit recording here. However, it might be of interest to note that one of the charter members, Mr. L. D. Taylor, afterwards was Mayor of Vancouver for a number of years. In the election of 1938, he was candidate for this office again but was unsuccessful.

During the past decade, the Society has increased in membership and scope so that it is now international in character, including members from the University of Washington, Oregon State College, and various United States Experiment Stations. In 1927, the membership was thirty-three. At the present time the membership stands at sixty-seven, and a further increase may be expected. The current publication of the Society is entitled "Proceedings of the Entomological Society of British Columbia," at present issued once a year, in February.

Slowly but steadily the Entomological Society of British Columbia is working toward the goal of becoming an organization embracing the entire northwestern part of the continent, issuing a quarterly publication, and including a membership commensurate with such a scientific body.

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